

Claims:

1. A semiconductor integrated circuit device comprising:

an antenna terminal which is connected to an antenna;

a power source circuit which has a rectifier/smoothing

5 circuit which obtains a DC voltage by rectifying and smoothing
an AC signal which is supplied to the antenna terminal from
the antenna, and a shunt regulator and a series regulator which
stabilize the DC voltage; and

an internal circuit which is operated upon the supply

10 of the DC voltage from the power source circuit,

wherein the series regulator performs a voltage
stabilizing operation and the shunt regulator stops a voltage
stabilizing operation in a stage that a signal is transmitted
to a reader/writer, and

15 wherein the shunt regulator performs a voltage
stabilizing operation and the series regulator stops a voltage
stabilizing operation in a stage other than the stage that the
signal is transmitted to the reader/writer.

2. A semiconductor integrated circuit device according

20 to claim 1,

wherein the semiconductor integrated circuit device
further includes a load modulator which is connected to the
antenna terminals, and

wherein the signal is transmitted to the reader/writer
25 in response to the presence or non-presence of an electric

current which flows in the load modulator.

3. A semiconductor integrated circuit device comprising:

an antenna terminal which is connected to an antenna;

a power source circuit which has a rectifier/smoothing

5 circuit which obtains a DC voltage by rectifying and smoothing
an AC signal which is supplied to the antenna terminal from
the antenna and a regulator which stabilizes the DC voltage;
and

an internal circuit which is operated upon the supply
10 of the DC voltage from the power source circuit,

wherein the regulator is operated as a series regulator
in a stage that a signal is transmitted to a reader/writer,
and

wherein the regulator is operated as a shunt regulator
15 in a stage other than the stage that the signal is transmitted
to the reader/writer.

4. A semiconductor integrated circuit device comprising:

an antenna terminal having two terminals for allowing
inputting of an AC signal from an antenna;

20 a rectifier/smoothing circuit which outputs a power
source voltage by rectifying and smoothing an AC signal which
is inputted to the antenna terminal;

a regulator which stabilizes the power source voltage
and outputs the stabilized power source voltage to a power source
25 terminal; and

an internal circuit which includes a load modulator which is connected between one terminal of the antenna terminal and a ground terminal,

wherein the regulator controls a voltage between the rectifier/smoothing circuit and the power source terminal when the load modulator is operated, and controls a current which flows between the power source terminal and the ground terminal when an operation of the load modulator is stopped.

5. A semiconductor integrated circuit device comprising:

an antenna terminal having two terminals for allowing inputting of an AC signal from an antenna;

a power source circuit which outputs a power source voltage by rectifying and smoothing an AC signal which is inputted to the antenna terminal, stabilizes the power source voltage, and outputs the stabilized power source voltage to a power source terminal; and

an internal circuit which includes a control circuit which generates a control signal for controlling a voltage stabilizing operation of the power source circuit,

wherein the power source circuit is controlled in response to the control signal such that a voltage between the rectifier/smoothing circuit and the power source terminal is changed in a stage that a signal is transmitted to a reader/writer, and is controlled in response to the control signal such that an electric current which flows between the power source terminal

and the ground terminal is changed in a stage other than the stage that the signal is transmitted to the reader/writer.

6. A semiconductor integrated circuit device according to any one of claims 1, 3, 4 or 5, wherein the antenna is
5 formed in a coil shape and the semiconductor integrated circuit device further includes the antenna formed of the coil.

7. An IC card comprising:

a coil which constitutes an antenna; and

the semiconductor integrated circuit device according
10 to any one of claims 1 to 5 which is connected to the antenna which is constituted of the coil.

8. A portable information terminal comprising:

a data processing circuit which processes data;

a display device which displays data which is inputted
15 to and outputted from the data processing circuit;

an input device which inputs data to the data processing circuit; and

the IC card described in claim 7,

wherein the display device and the IC card are electrically
20 coupled to each other and data which the IC card possesses is displayed on the display device.

9. A portable information terminal according to claim 8, wherein the portable information terminal includes a transmission and reception circuit for performing
25 communication using voice or data.

10. A portable information terminal according to claim 9, wherein the portable information terminal is a mobile phone.